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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/445,112	02/17/2000	HEINRICH JURGENSEN	P99.2405	9473

7590

09/30/2003

Schiff Hardin & Waite  
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7100 Sears Tower  
Chicago, IL 60606-6473

EXAMINER

FLORES RUIZ, DELMA R

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 09/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application N .

09/445,112

Applicant(s)

JURGENSEN, HEINRICH

Examiner

Delma R. Flores Ruiz

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 29-93 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 29-39 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.



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SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_ 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 29 – 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minns et al (5,966,490) in view of Brodsky (6,489,985).

***Regarding claim 29*** Minns discloses a method for reducing pump light in a region of a laser light exit of a laser resonator fiber, comprising the steps of; providing said laser resonant fiber (see Fig. 1 Character 12) as comprising a fiber core (see Fig. 2, Character 34) surrounded by a pump fiber comprising an inner fiber portion which in turn is surrounded by a sheath (see Fig. 2, Characters 36 and 38); and at a last section of said pump fiber preceding said laser light exit, removing at least a portion of the sheath to allow substantial remaining pump light to escape from the pump fiber and thus to reduce pump light from being emitted with the laser light at said laser light exit (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3,

Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 – 47). Minns discloses the claimed invention except for pump light. It would have been obvious at the time of applicant's invention, to combine Brodsky of teaching a pump light with laser because the laser is used to give light to the optica fiber, which the light passes atravez of the fiber and is reflected to the other side.

**Regarding claim 30** Minns discloses a step of at least partially stripping said laser section of said sheath (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3, Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 – 47).

**Regarding claim 31 and 32**, Minns discloses a sheath is entirely stripped away at said last section and manufacture of said last section only at least a part of said sheath is provided thereon (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3, Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 – 47).

**Regarding claim 33 – 35**, Minns discloses a manufacture of said last section no sheath is provided thereon at all and said sheath such that a diameter thereof tapers in wedge-like fashion toward said light exit in a region of said last section and removing at least the portion of said sheath at sad section by etching (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3, Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 - 47).

**Regarding claim 36**, Minns discloses a fiber laser, comprising; a laser fiber core (see Fig. 2, Character 34) as a laser resonator surrounded by a pump fiber comprising an inner fiber portion (see Fig. 2, Character 36) which in turn is surrounded by an outer sheath (see Fig. 2, Character 38), and at a last section of the pump fiber leading to said light exit said sheath being at least partially removed to allow substantial remaining pump light to escape from the pump fiber and thus to reduce pump light emitted with laser light at said laser light exit (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3, Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 - 47). Minns discloses the claimed invention except for pump light. It would have been obvious at the time of applicant's invention, to combine Brodsky of teaching a pump light with laser because the laser is used to give light to the optica fiber, which the light passes atravez of the fiber and is reflected to the other side.

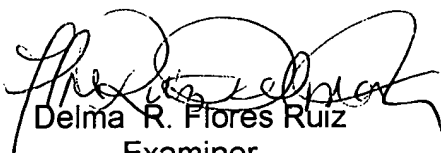
**Regarding claim 37 – 39**, Minns discloses a sheath at said last section entirely removed, at a region of said last section said sheath tapers in a wedge-like fashion toward said light exit and last section said sheath is removed completely and an outer portion of said inner fiber portion is roughened where said sheath is completely removed leading to said laser light exit, (see Figs. 1 – 4, Abstract, Column 1, Lines 19 – 22, Column 2, Lines 20 – 25, Column 3, Lines 45 – 58, Column 4, Lines 4 – 49, Column 6, Lines 50 – 56, Column 7, Lines 1 – 67, Column 8, Lines 1 – 6, 33 – 43, and Column 10, Lines 1 – 47).

### **Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Delma R. Flores Ruiz whose telephone number is (703) 308-6238. The examiner can normally be reached on M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on (703) 308-3098. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.



Delma R. Flores Ruiz  
Examiner  
Art Unit 2828  
DRFR/PI  
September 11, 2003



Paul Ip  
Supervisor Patent Examiner  
Art Unit 2828